

August 15, 2005

Mr. Floyd Wiggins
1370 Airport Boulevard
Santa Rosa, CA 95403

**Re: Quarterly Groundwater Monitoring and Sampling Report – Second Quarter 2005,
Wiggins Property, 3454 Santa Rosa Avenue, Santa Rosa, California, SCDHS-EHD
Site # 00001849, NCRWQCB Site # 1TSR007**

Dear Mr. Wiggins:

This report presents the results of the second quarter 2005 groundwater monitoring and sampling activities performed on May 12, 2005, at 3454 Santa Rosa Avenue (site), Santa Rosa, California (Figures 1 and 2). In addition, this report presents the baseline and initial groundwater sampling prior to the sparging of ozone as required by the April 18, 2005 letter from the Sonoma County Department of Health Services (SCDHS).

GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

The Site-Specific Sampling Procedures, provided in Appendix A, describe in detail all of the monitoring and sampling activities that were performed at the site on May 12, 2005. A brief summary of these activities is also provided below.

Personnel Present: Winzler & Kelly's technicians, Pon Xayasaeng and Brian Bacciarini, performed the groundwater monitoring and sampling activities.

Free-Product Monitoring: Prior to sampling activities, monitoring well MW-10 was evaluated for the presence of free product (petroleum hydrocarbons) using an oil/water interface probe. Additionally, a clear plastic bailer was used to visually confirm the presence of free product.

Depth-to-Water: An electronic water level meter was used to measure the depth-to-groundwater (DTW) in each monitoring well after allowing the groundwater in each well to equilibrate to atmospheric pressure for approximately 30 minutes. An oil/water interface probe was used to measure DTW in monitoring well MW-10. DTW was measured to be 3.54 feet below ground surface (bgs). The oil/water interface probe did not detect free product in MW-10; therefore, depth-to-product (DTP) was not measured.

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Dissolved Oxygen: Following DTW measurements, a calibrated dissolved oxygen (DO) meter was used to measure the concentrations of DO in monitoring wells MW-5 through MW-9, MW-11, and MW-12.

Purging: An electronic 12-volt submersible pump was used to purge each of the monitoring wells sampled until the indicator parameters of pH, conductivity, and temperature had stabilized. Monitoring well MW-10 was purged using a new disposable bailer.

Domestic wells were purged by running the tap closest to the well system's pressure tank until the well pump switched on.

Monitoring Well Sampling: Groundwater samples were collected from monitoring wells MW-5 and MW-8 through MW-12. New disposable bailers were used to collect and transfer the groundwater samples from each monitoring well into the appropriate, laboratory-supplied, certified clean sample containers.

Domestic Well Sampling: Prior to the collection of domestic well groundwater sampling, well owners were notified of the sampling event. Groundwater samples were collected from the domestic wells located at 3415 (DW-3415), 3450 (DW-3450), and 3521 (DW-3521) Santa Rosa Avenue. Groundwater samples were not collected from the domestic well located at 3455 (DW-3455) because the resident was not home.

Chemical Analysis: Analytical Sciences Laboratory (Analytical Sciences) of Petaluma, California (a California-certified laboratory) analyzed each of the groundwater samples collected from the monitoring wells for total petroleum hydrocarbons as gasoline (TPH-G), as diesel (TPH-D), and as motor oil (TPH-MO) by EPA Method 8015M, and for benzene, toluene, ethyl benzene, and total xylenes (BTEX) and oxygenated fuel additives by EPA Method 8260B.

As part of the baseline groundwater sampling prior to the sparging of ozone, groundwater samples were analyzed for hexavalent chromium by EPA Method 7196A, for bromate and bromide by EPA Method 300 (IC), and for molybdenum, selenium, and vanadium (metals) by EPA Method 6010 and 200.9.

Analytical Sciences analyzed each of the groundwater samples collected from the domestic wells for TPH-G by EPA Method 8015M and for BTEX and oxygenated fuel additives by EPA Method 8260B.

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Groundwater Monitoring and Sampling Results – May 12, 2005

The groundwater elevation data and the direction and gradient of groundwater flow at the site are summarized in Tables 1 and 2, respectively. A groundwater contour map, provided as Figure 3, illustrates the groundwater elevation contours and flow direction at the site on May 12, 2005. As Figure 3 shows, the groundwater flow direction at the site was toward the southwest at an approximate gradient of 0.01 ft/ft.

During purging activities, the parameters of pH, conductivity, temperature, and oxidation-reduction potential were monitored in the groundwater extracted from the wells. A summary of these indicator parameters is provided in Table 3. In addition to monitoring the indicator parameters, MW-10 was monitored for the presence of free product. The previously installed hydrocarbon adsorbing, hydrophobic sock was removed and weighed. Four ounces of absorbed free product was measured from the sock. An oil/water interface probe was then used to measure free product in MW-10. Free product was not detected using the oil/water interface probe; however, visual observation confirmed the presence of minimal sheen in MW-10. A measurable quantity of free product was not detected in any of the other monitoring wells that were sampled.

The laboratory analysis of the groundwater samples collected from monitoring wells MW-8, MW-9, MW-11, MW-12, and the domestic wells did not quantify any petroleum-related constituents above the laboratory's reportable detection limits (RDLs). Only the groundwater samples collected from monitoring wells MW-5 and MW-10 contained petroleum-related constituents above the laboratory's RDLs.

The analytical results of the groundwater samples are summarized in Table 4. Figure 4 depicts the concentrations of TPH-G, benzene, and methyl-tert butyl ether (MTBE) in the groundwater samples collected from the monitoring wells on May 12, 2005.

Additionally, analytical results of groundwater samples collected from the monitoring wells (MW-5 and MW-8 through MW-12) did not quantify hexavalent chromium, bromate, bromide, and metals above the laboratory's RDLs. Table 5 presents the analytical results of the ozone sparging parameters.

The laboratory QA/QC included the use of method blanks to exclude false-positive analyses and the use of laboratory control samples to evaluate the percentage recovery of known analyte spikes. The recovery percentages for all of the sample analytes were within acceptable ranges. The complete laboratory reports, QA/QC data, and the chain-of-custody form are included in Appendix B.

GeoTracker Data Entry

As required by Assembly Bill AB2886, Winzler & Kelly has submitted the first quarter 2005 monitoring report, the first and second quarter 2005 analytical EDF report, and the groundwater

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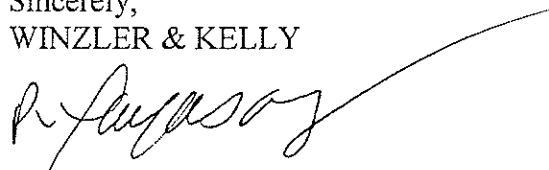
well measurement file for the May 12, 2005 monitoring event to the GeoTracker database. In addition, the Remedial Action Plan, Free Product Removal Report, and the Response to the SCDHS letter have been submitted to GeoTracker. Upload verification forms are included in Appendix C. Winzler & Kelly will submit this report to the GeoTracker database upon completion.

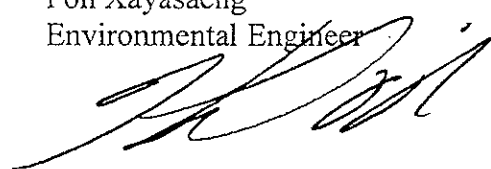
Recommendations

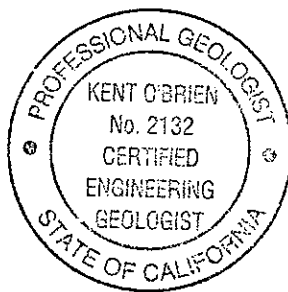
Winzler & Kelly recommends the continuation of quarterly groundwater monitoring and sampling at the site. The next monitoring and sampling event is schedule for August 2005.

Should you have any questions or comments regarding this project, please contact David J. Vossler, Project Manager, at (707) 523-1010.

Sincerely,
WINZLER & KELLY


Pon Xayasaeng
Environmental Engineer


Kent O'Brien, RG, CEG
Senior Project Geologist



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Attachments:

Figures:

- Figure 1 – Location Map
- Figure 2 – Site Map
- Figure 3 – Groundwater Contour Map
- Figure 4 – Petroleum Hydrocarbons in Groundwater

Tables:

- Table 1 – Water Level Data
- Table 2 – Groundwater Gradient and Flow Direction
- Table 3 – Indicator Parameters
- Table 4 – Analytical Results of Groundwater Samples
- Table 5 – Additional Groundwater Analytical Results

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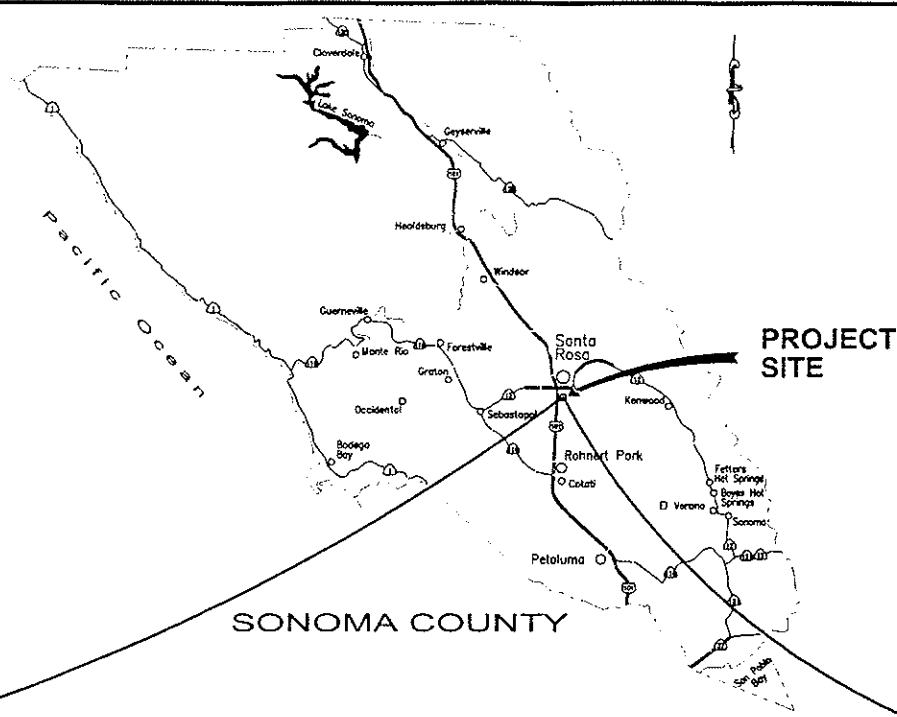
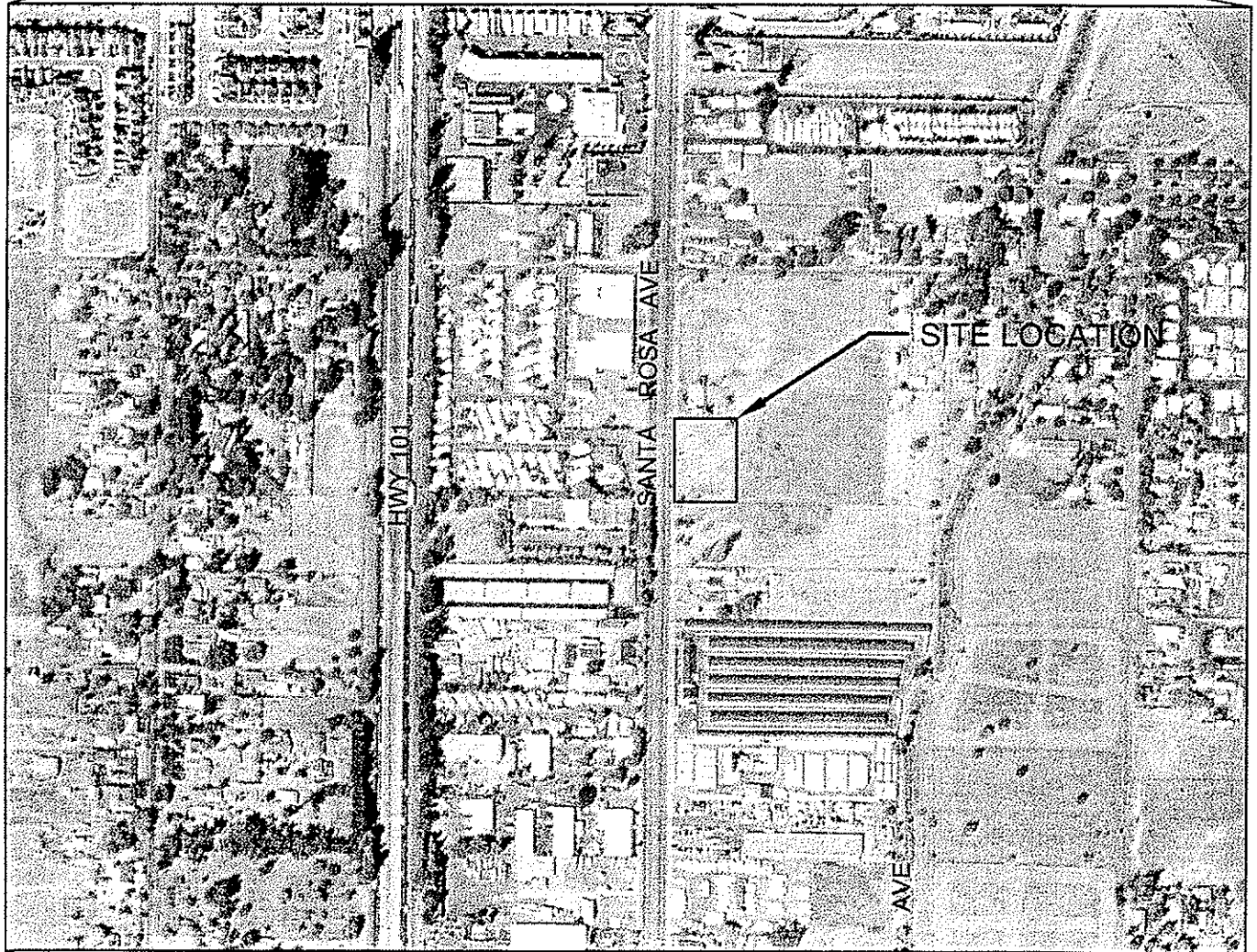
Appendices:

Appendix A – Site-Specific Sampling Procedures

Appendix B – Analytical Laboratory Report

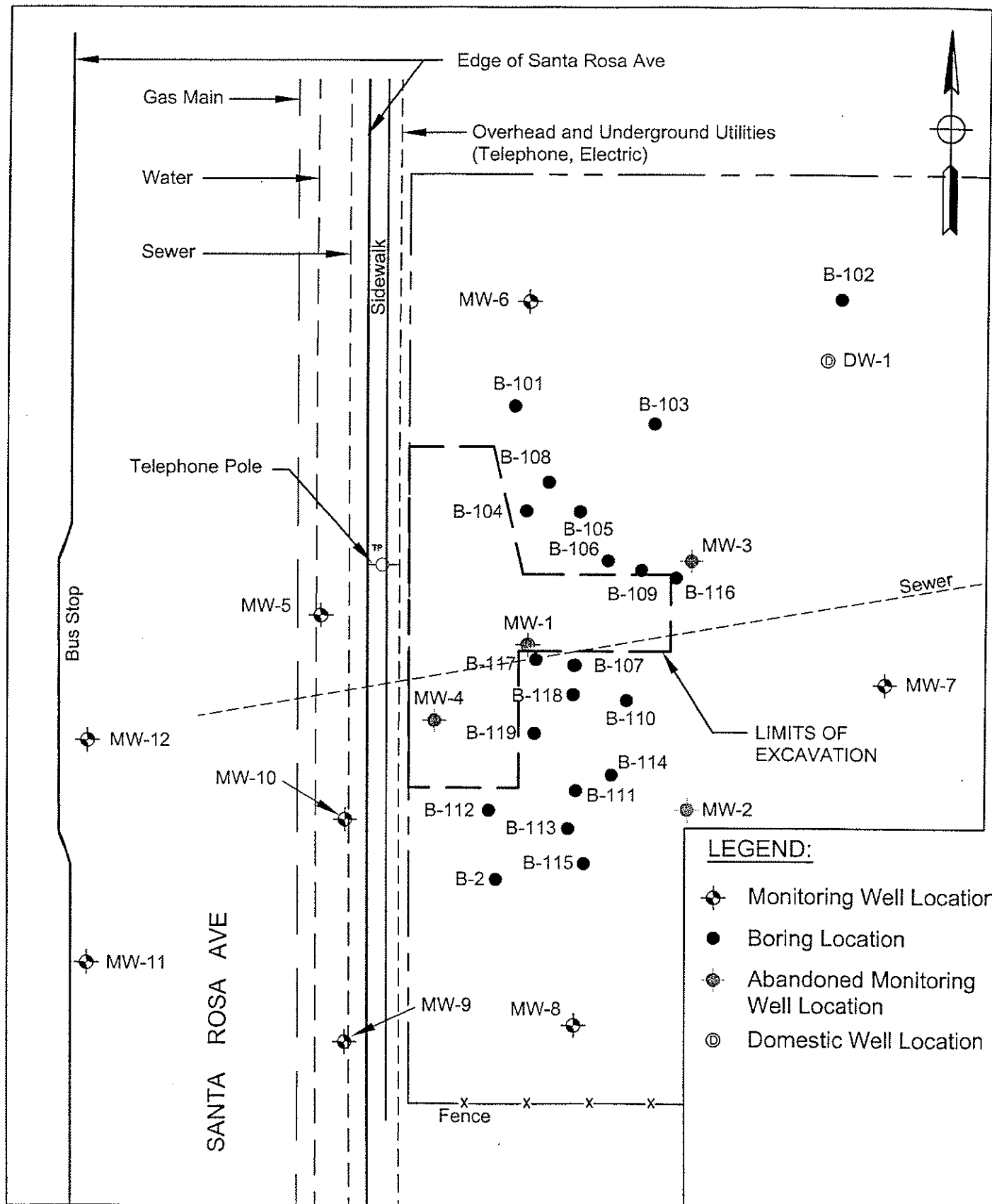
Appendix C – GeoTracker Upload Verifications

c: Mr. Cliff Ives, Sonoma County Department of Health Services, Environmental Health
Division, 475 Aviation Blvd, Suite 220, Santa Rosa, CA 95403



WIGGINS PROPERTY
3454 Santa Rosa Ave
Santa Rosa, California

LOCATION MAP
FIGURE 1



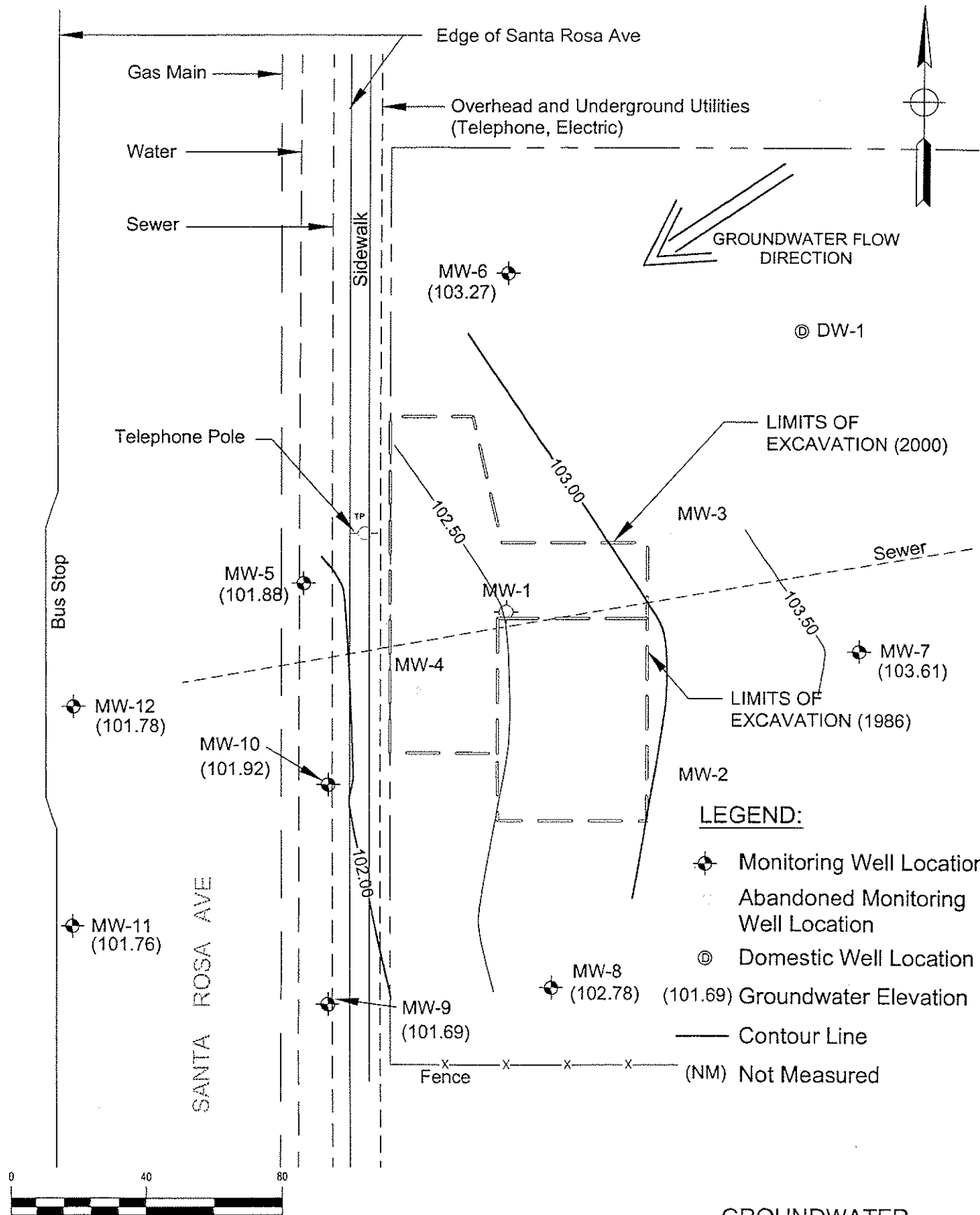
LEGEND:

- ⊕ Monitoring Well Location
- Boring Location
- ⊗ Abandoned Monitoring Well Location
- ⊙ Domestic Well Location

WIGGINS PROPERTY
3454 Santa Rosa Ave
Santa Rosa, California

SITE MAP
FIGURE 2

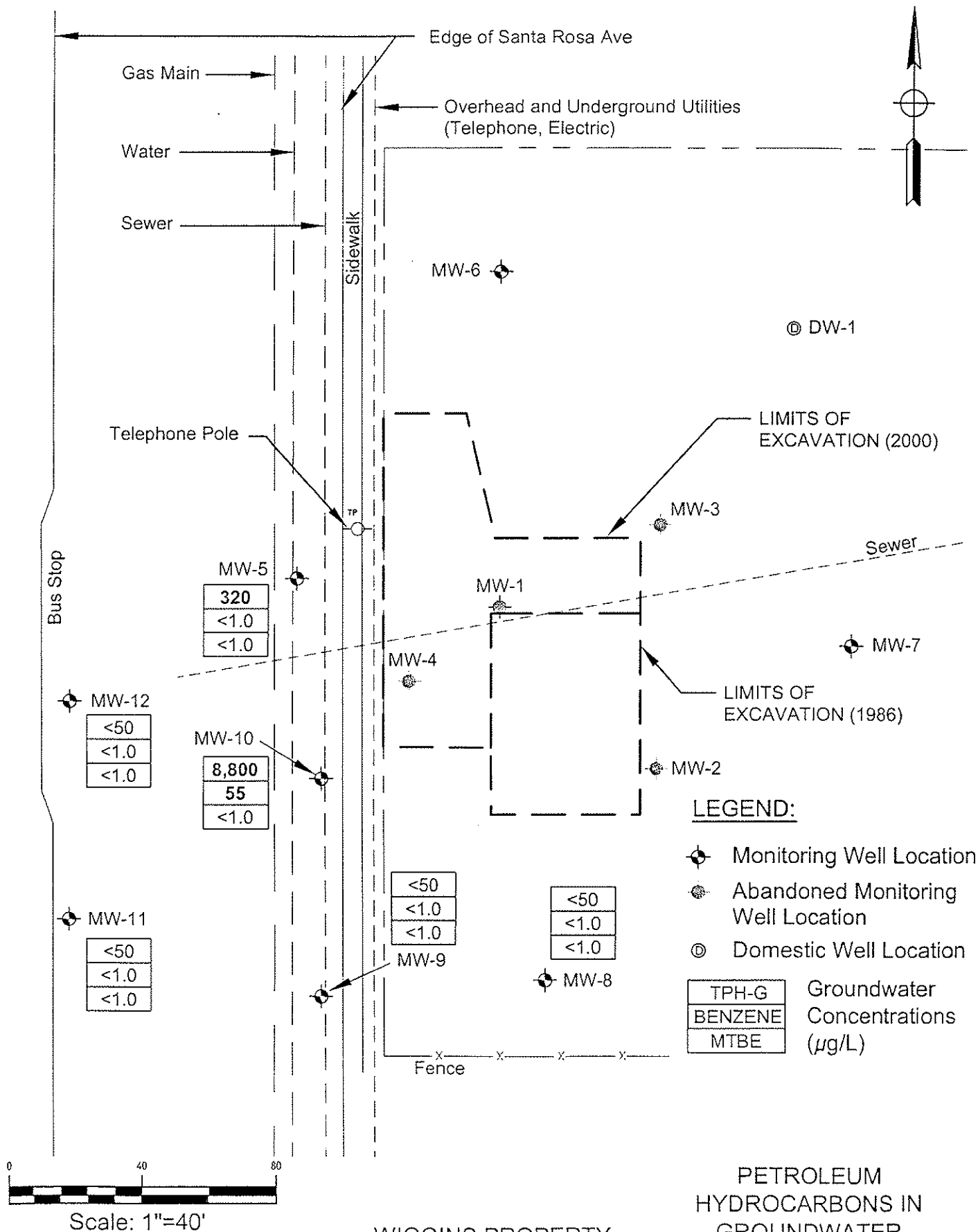
J:\04\259801\CAD\GW--Cont.dwg Jul 01, 2005 - 3:13pm



WIGGINS PROPERTY
3454 Santa Rosa Ave
Santa Rosa, California

GROUNDWATER
CONTOUR MAP
May 12, 2005
FIGURE 3

WINZLER & KELLY
CONSULTING ENGINEERS



WIGGINS PROPERTY
3454 Santa Rosa Ave
Santa Rosa, California

PETROLEUM
HYDROCARBONS IN
GROUNDWATER
May 12, 2005
FIGURE 4

Table 1. Water Level Data
Wiggins Property
3454 Santa Rosa Avenue, Santa Rosa, CA

Well ID	Date	Groundwater Elevation	Depth-to-Water	Top of Casing	Free Product Thickness	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
		MSL	feet bgs		feet			
MW-1 THROUGH MW-4 HAVE BEEN ABANDONED								
MW-5	04/29/04	99.64	6.25	105.89	--- ^a	5'-20'	4'-21.5'	0'-4'
	07/29/04	96.64	9.25		--- ^a			
	03/02/05	102.34	3.55		--- ^a			
	05/12/05	101.88	4.01		--- ^a			
MW-6	04/29/04	100.72	5.76	106.48	--- ^a	5'-20'	4'-21.5'	0'-4'
	07/29/04	97.57	8.91		--- ^a			
	03/02/05	105.03	1.45		--- ^a			
	05/12/05	103.27	3.21		--- ^a			
MW-7	04/29/04	100.55	5.73	106.28	--- ^a	5'-20'	6'-21.0'	0'-4'
	07/29/04	97.05	9.23		--- ^a			
	03/02/05	104.78	1.50		--- ^a			
	05/12/05	103.61	2.67		--- ^a			
MW-8	04/29/04	99.81	6.53	106.34	--- ^a	5'-20'	4'-21.0'	0'-4'
	07/29/04	96.56	9.78		--- ^a			
	03/02/05	104.10	2.24		--- ^a			
	05/12/05	102.78	3.56		--- ^a			
MW-9	04/29/04	99.67	6.07	105.74	--- ^a	5'-20'	4'-20'	0'-4'
	07/29/04	96.57	9.17		--- ^a			
	03/02/05	102.18	3.56		--- ^a			
	05/12/05	101.69	4.05		--- ^a			
MW-10	8/15/2002*	94.56	11.30	105.86	--- ^a	5'-20'	4'-20'	0'-4'
	11/26/2002*	95.16	10.70		--- ^a			
	2/26/2003*	100.89	4.97		--- ^a			
	5/20/2003*	98.40	7.46		--- ^a			
	9/24/2003*	95.10	10.67		--- ^a			
	04/29/04	---	--- ^b		0.05			
	07/29/04	---	--- ^b		0.15			
	03/02/05	---	--- ^b		0.02			
	5/12/2005 ^c	101.92	3.94		<0.02			
MW-11	04/29/04	99.59	6.11	105.70	--- ^a	5'-20'	4'-20'	0'-4'
	07/29/04	96.60	9.10		--- ^a			
	03/02/05	102.21	3.49		--- ^a			
	05/12/05	101.76	3.94		--- ^a			

Table 1. Water Level Data
Wiggins Property
3454 Santa Rosa Avenue, Santa Rosa, CA

Well ID	Date	Groundwater Elevation	Depth-to-Water	Top of Casing	Free Product Thickness	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
		MSL	feet bgs		feet			
MW-12	04/29/04	99.57	6.26	105.83	--- ^a	5'-20'	4'-20'	0'-4'
	07/29/04	96.59	9.24		--- ^a			
	03/02/05	102.21	3.62		--- ^a			
	05/12/05	101.78	4.05		--- ^a			

Abbreviations:

MSL = Mean Sea Level

bgs = Below Ground Surface

--- = Not Measured

* = Data by others, not verified by Winzler & Kelly

a = Free Product Not Present

b = Free Product Present

c = Depth-to-water measured using free product interface meter

Table 2. Groundwater Gradient and Flow Direction

Wiggins Property
3454 Santa Rosa Ave, Santa Rosa, CA

Date	Groundwater Gradient (ft/ft)	Flow Direction	Wells Used for Calculating Gradient and Flow Direction
04/29/04	0.01	Southwest	MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12
07/29/04	0.01	Southwest	MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12
03/02/05	0.02	Southwest	MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12
05/12/05	0.01	Southwest	MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12

Table 3. Indicator Parameters
Wiggins Property
3454 Santa Rosa Avenue, Santa Rosa, CA

Well ID	Sample Date	pH	Temperature (°F)	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)
MW-1 THROUGH MW-4 HAVE BEEN ABANDONED						
MW-5	04/29/04	6.63	67.3	1317	-38	NM
	07/29/04	6.52	68.9	1265	-101	NM
	03/02/05	6.65	67.6	1416	-14	0.66
	05/12/05	6.65	66.2	1060	144	0.25
MW-6	04/29/04	6.42	67.8	778	180	NM
	07/29/04	--	--	--	--	NM
	03/02/05	--	--	--	--	0.70
	05/12/05	--	--	--	--	0.69
MW-7	04/29/04	6.67	61.7	780	215	NM
	07/29/04	--	--	--	--	3.45
	05/12/05	--	--	--	--	1.37
MW-8	04/29/04	6.36	59.7	332	-51	NM
	07/29/04	--	--	--	--	NM
	03/02/05	--	--	--	--	3.05
	05/12/05	6.52	59.36	345	-34	0.22
MW-9	04/29/04	6.81	66.2	443	186	NM
	07/29/04	6.76	66.7	721	199	NM
	03/02/05	6.76	65.3	939	285	1.69
	05/12/05	6.63	68.0	1466	-53	2.41
MW-10	04/29/04	--	--	--	--	NM
	07/29/04	--	--	--	--	NM
	03/02/05	--	--	--	--	NM
	05/12/05	6.59	67.6	973	-82	NM
MW-11	04/29/04	6.84	67.5	867	155	NM
	07/29/04	6.74	67.5	759	194	NM
	03/02/05	6.81	67.5	862	233	0.34
	05/12/05	6.83	67.3	804	117	0.43
MW-12	04/29/04	6.98	69.6	849	142	NM
	07/29/04	6.85	68.0	881	188	NM
	03/02/05	6.90	68.0	817	229	0.76
	05/12/05	6.95	67.5	772	106	0.35

Abbreviations:

°F = degrees Fahrenheit
uS/cm = microSiemens per centimeter
ORP = Oxidation Reduction Potential
mV = milliVolts

DO = Dissolved Oxygen
mg/L = milligrams per liter
NM = Not Measured
-- = Not Sampled

Table 4. Analytical Results of Groundwater Samples

Wiggins Property
3454 Santa Rosa Avenue, Santa Rosa, CA

Well ID	Date Sampled	TPH-G	TPH-D	TPH-MO	B	T	E	X	EDB	EDC	TBA	MTBE	DIPE	ETBE	TAME	TOC
ug/L																mg/L
MW-1 through MW-4 have been abandoned.																
MW-5	04/29/04	870	57 ^a	<200	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	1,100	95 ^a	<200	4.8	<1.0	3.7	1.6	<1.0	1.8	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	750	<50	<200	8.3	1.7	6.6	26	<1.0	1.2	46	<1.0	<1.0	<1.0	<1.0	<1.0 ^b
	05/12/05	320	54	<200	<1.0 ^c	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---
MW-6	04/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	03/02/05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-7	04/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	03/02/05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-8	04/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	03/02/05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/12/05	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---
MW-9	04/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	<50	<50	<200	<1.0	5.5	2.0	9.8	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0
	05/12/05	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---
MW-10	04/29/04	Approximately 0.05 feet of free product present.														
	07/29/04	Approximately 0.15 feet of free product present.														
	03/02/05	Approximately 0.02 feet of free product present.														
	05/12/05	8,800	8,000 ^d	<200	55	17	310	426	---	---	<250	<10	<10	<10	<10	---
MW-11	04/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0
	05/12/05	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---
MW-12	04/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	<1.0
	05/12/05	<50	<50	<200	<1.0	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---
DW-3415	04/29/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	05/12/05	<50	---	---	<1.0	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---
DW-3455	04/29/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
DW-3450	05/06/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	05/12/05	<50	---	---	<1.0	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---
DW-3521	05/06/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	07/29/04	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	03/02/05	<50	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0	---
	05/12/05	<50	---	---	<1.0	<1.0	<1.0	<1.0	---	---	<25	<1.0	<1.0	<1.0	<1.0	---

Notes:

- a = The chromatogram does not exhibit a chromatographic pattern characteristic of diesel. Higher boiling point constituents of weathered gasoline are present.
b = The laboratory's reportable detection limit was increased slightly due to limited sample volume.
c = The following additional compound was detected: 1,2-dichloroethane (1.0 ug/L)
d = The sample chromatogram exhibits a pattern that suggests both weathered gasoline and diesel are simultaneously present.
--- = Not analyzed
<50 = Analyte not detected at indicated detection limit.

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline
TPH-D = Total petroleum hydrocarbons as diesel
TPH-MO = Total petroleum hydrocarbons as motor oil
B = Benzene
T = Toluene
E = Ethyl benzene
X = Total xylenes
EDB = 1,2-dibromoethane
EDC = 1,2-dichloroethane

MTBE = Methyl tert-butyl ether
TBA = Tert-butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
TOG = Total Oil & Grease
mg/L = milligrams per liter
ug/L = micrograms per liter

Analytical Methods:

418.1M = EPA Method for TOG
5030/8015M = EPA Method for TPH-G
3510/8015M = EPA Method for TPH-D & TPH-MO
8260B = EPA Method for BTEX, oxygenates, and lead scavengers

Table 5. Additional Groundwater Analytical Results

Wiggins Property
3454 Santa Rosa Avenue, Santa Rosa, CA

Well ID	Sample Date	Hexavalent Chromium (CR ⁺⁶)	Bromate (BrO ₃ ⁻¹)	Bromide (Br ⁻¹)	Molybdenum (Mo)	Selenium (Se)	Vanadium (V)
		mg/L					
MW-5	05/12/05	<0.005 ^a	<0.015 ^b	<0.20	<0.05	<0.005	<0.05
MW-8	05/12/05	<0.005 ^a	<0.015 ^b	<0.20	<0.05	<0.005	<0.05
MW-9	05/12/05	<0.005 ^a	<0.015 ^b	<0.20	<0.05	<0.005	<0.05
MW-10	05/12/05	<0.005 ^a	<0.015 ^b	<0.20	<0.05	<0.005	<0.05
MW-11	05/12/05	<0.005 ^a	<0.015 ^b	<0.20	<0.05	<0.005	<0.05
MW-12	05/12/05	<0.005 ^a	<0.015 ^b	<0.20	<0.05	<0.005	<0.05

Notes:

a = The specific analysis for hexavalent chromium performed within 24 hours yielded a detection limit of 0.010 mg/L. Subsequent and separate analysis for total chromium using Zeeman graphite furnace (EPA 200.9) resulted in no detection of chromium at a detection limit well below 0.005 mg/L. Hexavalent chromium is not present at the level of 0.005 mg/L

b = The sample required a dilution due to a sample matrix interference. The dilution resulted in a slight increase in the reported detection limit.

Appendix A

Site-Specific Sampling Procedures

WINZLER & KELLY CONSULTING ENGINEERS

Site-Specific Groundwater Sampling Procedures Wiggins Property 3454 Santa Rosa Avenue Santa Rosa, California May 12, 2005

1. Objective

Collect representative water level data and groundwater samples.

2. Background

Based on the analytical results of the previous sampling, field work proceeded from the monitoring wells in which the samples collected had the lowest concentrations of constituents to the wells that had the highest concentrations of constituents.

Water levels were measured to determine the direction and gradient of groundwater flow. Representative groundwater samples from the water-bearing zone were obtained using disposable polyethylene bailers following purging.

3. Personnel Required and Responsibilities

Winzler & Kelly Technicians: Pon Xayasaeng and Brian Bacciarini performed groundwater monitoring and sampling activities in accordance with the procedures outlined below.

4. Procedures

4a. Decontamination Procedures

- The wash and rinse buckets, the ES-60 purger pump, and the water level meter were decontaminated using alconox soap and potable water.
- The pump and water level meter were decontaminated following use in each well.
- Nitrile gloves were worn by the sampler at all times and changed after handling equipment and instruments.

4b. Calibration Procedures

- The Ultrameter was calibrated for conductivity and pH. Temperature calibration is not necessary in the Ultrameter.
- Conductivity was calibrated using KCl-7000 standard solution within its expiration date.
- The calibration for pH included “zeroing” the Ultrameter with a pH 7 buffer solution followed by adjusting the gain with acid and base buffers (4.01 and 10.00).

4c. Groundwater Elevations

- All monitoring wells were opened and expandable caps removed.
- Each well was allowed to equilibrate to atmospheric pressure.
- An electronic water level meter was used to measure the depth-to-groundwater in each monitoring well.
- An oil/water interface meter and a flapper valve were used to measure the amount of free product present in monitoring well MW-10.
- The depth, time, and visual observations regarding well access, condition, security, etc., were recorded on a Water Level Data Sheet.

4d. DO Concentrations

- The membrane on the YSI Model 55 DO meter was checked for the presence of bubbles and wrinkles, neither of which was observed.
- The meter was calibrated in the field prior to collecting measurements.
- Using the calibrated YSI Model 55 DO Meter, DO concentrations were measured in each monitoring well except for MW-10.

4e. Purging

- The volume of standing water in each monitoring well was calculated using the diameter of the well, the measured depth-to-water and the depth-to-bottom. The volume was recorded on the Well Sampling Data Sheet for each well.
- Monitoring well MW-10 was purged with a previously unused bailer.
- All other wells were purged using an ES-60 purger pump attached to 40-feet of plastic tubing.
- Domestic wells were purged by running the tap closest to the well and until the well pump switched on.
- During purging of monitoring wells, the parameters of conductivity, pH, temperature, and oxidation-reduction potential were monitored using the Ultrameter at each well casing interval. Visual observations of color/odor/turbidity were also monitored.
- The time, readings, and visual comments were recorded on the Well Sampling Data Sheet.
- Each monitoring well was purged a minimum of three casing volumes, or until the indicator parameters stabilized.
- Purge and decontamination water was transferred to 55-gallon drums labeled and stored on site.

4f. Groundwater Sample Collection

- Groundwater samples were collected by lowering previously unused, disposable, polyethylene, bottom-filling bailers into the well.
- When completely full, the bailer was carefully retracted from the well casing.
- The water was transferred from the bailer to the appropriate certified clean sampling containers.
- Each VOA was immediately capped. The vial was checked for air bubbles by inverting and gently tapping. If any bubbles were visible, a new vial was filled and confirmed to be free of any air bubbles.

- All samples were labeled with the following information:

Sample ID	Date and Time Sample Collected
Location	Sampler's Initials
Project Number	
- Sample information was documented on a Chain-of-Custody form.
- All samples were placed in an ice chest chilled with ice.
- Upon completion of the sampling activities, each well was closed and secured by replacing the well cap and lock.

5. **Equipment Used:**

- Disposable gloves
- Potable water
- Alconox soap
- Containers to hold rinsate water
- Scrub Brushes
- Tools to open wells
- Keys to wells
- Water Level Data Form/pencil
- Well Sampling Data Sheet
- Groundwater Sampling Log form
- Water level meter
- 12-volt DC 1.5-inch electric submersible pump
- UltraMeter
- Containers to hold extracted water (as required)
- Disposable bailers (previously unused)
- Monofilament nylon line (50-lb test)
- Scissors
- Laboratory supplied sample containers (preserved, as required)
- Sample labels
- Ice chest
- Ice
- Labels/indelible marker
- Trash bags
- 55-gallon drums
- Ziploc bags
- Portable 12-V battery

Appendix B

Analytical Laboratory Report



Report Date: June 8, 2005

Pon Xayasaeng
Winzler & Kelly Consulting Engineers
495 Tesconi Circle, Suite 9
Santa Rosa, CA 95401-4696

LABORATORY REPORT

Project Name: **Wiggins Property** **0259805001.3200**

Lab Project Number: **5051206**

This 24 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.
Laboratory Director



TPH Gasoline in Water

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
29782	DW-3521	TPH/Gasoline	ND	50
29783	DW-3415	TPH/Gasoline	ND	50
29784	DW-3450	TPH/Gasoline	ND	50
29785	MW-8	TPH/Gasoline	ND	50
29786	MW-12	TPH/Gasoline	ND	50
29787	MW-11	TPH/Gasoline	ND	50
29788	MW-9	TPH/Gasoline	ND	50
29789	MW-5	TPH/Gasoline	320	50
29790	MW-10	TPH/Gasoline	8,800	500

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 5030/8015M

QC Batch #: 5535



TPH Diesel & Motor Oil in Water

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
29785	MW-8	TPH/Diesel Motor Oil	ND ND	50 200

Date Sampled: 05/12/05	Date Extracted: 05/13/05	QC Batch #: 5534
Date Received: 05/12/05	Date Analyzed: 05/13/05	Method: EPA 3510/8015M

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
29786	MW-12	TPH/Diesel Motor Oil	ND ND	50 200

Date Sampled: 05/12/05	Date Extracted: 05/13/05	QC Batch #: 5534
Date Received: 05/12/05	Date Analyzed: 05/13/05	Method: EPA 3510/8015M

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
29787	MW-11	TPH/Diesel Motor Oil	ND ND	50 200

Date Sampled: 05/12/05	Date Extracted: 05/13/05	QC Batch #: 5534
Date Received: 05/12/05	Date Analyzed: 05/13/05	Method: EPA 3510/8015M

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
29788	MW-9	TPH/Diesel Motor Oil	ND ND	50 200

Date Sampled: 05/12/05	Date Extracted: 05/13/05	QC Batch #: 5534
Date Received: 05/12/05	Date Analyzed: 05/13/05	Method: EPA 3510/8015M



Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
29789	MW-5	TPH/Diesel Motor Oil	54 ND	50 200

Date Sampled: 05/12/05	Date Extracted: 05/13/05	QC Batch #: 5534
Date Received: 05/12/05	Date Analyzed: 05/13/05	Method: EPA 3510/8015M

Lab #	Sample ID	Analysis	Result (ug/L)	RDL (ug/L)
29790	MW-10	TPH/Diesel Motor Oil	8,000 (1) ND	50 200

Date Sampled: 05/12/05	Date Extracted: 05/13/05	QC Batch #: 5534
Date Received: 05/12/05	Date Analyzed: 05/13/05	Method: EPA 3510/8015M

(1) The sample chromatogram exhibits a pattern that suggests both weathered gasoline and diesel are simultaneously present.



Volatile Hydrocarbons by GC/MS in Water

Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
29782	DW-3521	benzene	ND	1.0
		toluene	ND	1.0
		ethyl benzene	ND	1.0
		m,p-xylene	ND	1.0
		o-xylene	ND	1.0

Oxygenated Gasoline Additives

tert-butyl alcohol (TBA)	ND	25
methyl tert-butyl ether (MTBE)	ND	1.0
di-isopropyl ether (DIPE)	ND	1.0
ethyl tert-butyl ether (ETBE)	ND	1.0
tert-amyl methyl ether (TAME)	ND	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	20.9	105	70 – 130
toluene-d ₈ (20)	20.0	100	70 – 130
4-bromofluorobenzene (20)	19.5	97.5	70 – 130

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
29783	DW-3415	benzene	ND	1.0
		toluene	ND	1.0
		ethyl benzene	ND	1.0
		m,p-xylene	ND	1.0
		o-xylene	ND	1.0
Oxygenated Gasoline Additives				
		tert-butyl alcohol (TBA)	ND	25
		methyl tert-butyl ether (MTBE)	ND	1.0
		di-isopropyl ether (DIPE)	ND	1.0
		ethyl tert-butyl ether (ETBE)	ND	1.0
		tert-amyl methyl ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)		20.8	104	70 – 130
toluene-d ₈ (20)		20.3	102	70 – 130
4-bromofluorobenzene (20)		19.6	98.0	70 – 130

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
29784	DW-3450	benzene	ND	1.0
		toluene	ND	1.0
		ethyl benzene	ND	1.0
		m,p-xylene	ND	1.0
		o-xylene	ND	1.0

Oxygenated Gasoline Additives

tert-butyl alcohol (TBA)	ND	25
methyl tert-butyl ether (MTBE)	ND	1.0
di-isopropyl ether (DIPE)	ND	1.0
ethyl tert-butyl ether (ETBE)	ND	1.0
tert-amyl methyl ether (TAME)	ND	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	20.7	104	70 – 130
toluene-d ₈ (20)	20.2	101	70 – 130
4-bromofluorobenzene (20)	19.5	97.5	70 – 130

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/16/05, 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)	
29785	MW-8	benzene	ND	1.0	
		toluene	ND	1.0	
		ethyl benzene	ND	1.0	
		m,p-xylene	ND	1.0	
		o-xylene	ND	1.0	
	Oxygenated Gasoline Additives				
		tert-butyl alcohol (TBA)	ND	25	
		methyl tert-butyl ether (MTBE)	ND	1.0	
		di-isopropyl ether (DIPE)	ND	1.0	
		ethyl tert-butyl ether (ETBE)	ND	1.0	
	tert-amyl methyl ether (TAME)	ND	1.0		
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)	
dibromofluoromethane (20)		20.7	104	70 – 130	
toluene-d ₈ (20)		20.1	101	70 – 130	
4-bromofluorobenzene (20)		19.4	97.0	70 – 130	

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
29786	MW-12	benzene	ND	1.0
		toluene	ND	1.0
		ethyl benzene	ND	1.0
		m,p-xylene	ND	1.0
		o-xylene	ND	1.0
Oxygenated Gasoline Additives				
		tert-butyl alcohol (TBA)	ND	25
		methyl tert-butyl ether (MTBE)	ND	1.0
		di-isopropyl ether (DIPE)	ND	1.0
		ethyl tert-butyl ether (ETBE)	ND	1.0
		tert-amyl methyl ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)		20.7	104	70 – 130
toluene-d ₈ (20)		20.2	101	70 – 130
4-bromofluorobenzene (20)		19.7	98.5	70 – 130

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
29787	MW-11	benzene	ND	1.0
		toluene	ND	1.0
		ethyl benzene	ND	1.0
		m,p-xylene	ND	1.0
		o-xylene	ND	1.0
Oxygenated Gasoline Additives				
		tert-butyl alcohol (TBA)	ND	25
		methyl tert-butyl ether (MTBE)	ND	1.0
		di-isopropyl ether (DIPE)	ND	1.0
		ethyl tert-butyl ether (ETBE)	ND	1.0
		tert-amyl methyl ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)		20.7	104	70 – 130
toluene-d ₈ (20)		20.3	102	70 – 130
4-bromofluorobenzene (20)		19.3	96.5	70 – 130

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
29788	MW-9	benzene	ND	1.0
		toluene	ND	1.0
		ethyl benzene	ND	1.0
		m,p-xylene	ND	1.0
		o-xylene	ND	1.0
Oxygenated Gasoline Additives				
		tert-butyl alcohol (TBA)	ND	25
		methyl tert-butyl ether (MTBE)	ND	1.0
		di-isopropyl ether (DIPE)	ND	1.0
		ethyl tert-butyl ether (ETBE)	ND	1.0
		tert-amyl methyl ether (TAME)	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)		20.6	103	70 – 130
toluene-d ₈ (20)		20.3	102	70 – 130
4-bromofluorobenzene (20)		19.6	98.0	70 – 130

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)	
29789	MW-5	benzene	ND (2)	1.0	
		toluene	ND	1.0	
		ethyl benzene	ND	1.0	
		m,p-xylene	ND	1.0	
		o-xylene	ND	1.0	
		Oxygenated Gasoline Additives			
		tert-butyl alcohol (TBA)	ND	25	
		methyl tert-butyl ether (MTBE)	ND	1.0	
		di-isopropyl ether (DIPE)	ND	1.0	
		ethyl tert-butyl ether (ETBE)	ND	1.0	
		tert-amyl methyl ether (TAME)	ND	1.0	
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)	
dibromofluoromethane (20)		20.2	101	70 – 130	
toluene-d ₈ (20)		20.1	101	70 – 130	
4-bromofluorobenzene (20)		19.4	97.0	70 – 130	
Date Sampled: 05/12/05		Date Analyzed: 05/13/05		QC Batch #: 5533	
Date Received: 05/12/05		Method: EPA 8260B			

(2) The following additional compound was detected: 1,2-dichloroethane (1.0 ug/L).



Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
29790	MW-10	benzene	55	10
		toluene	17	10
		ethyl benzene	310	10
		m,p-xylene	400	10
		o-xylene	26	10

Oxygenated Gasoline Additives

tert-butyl alcohol (TBA)	ND	250
methyl tert-butyl ether (MTBE)	ND	10
di-isopropyl ether (DIPE)	ND	10
ethyl tert-butyl ether (ETBE)	ND	10
tert-amyl methyl ether (TAME)	ND	10

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	20.2	101	70 – 130
toluene-d ₈ (20)	20.1	101	70 – 130
4-bromofluorobenzene (20)	19.9	99.5	70 – 130

Date Sampled: 05/12/05
Date Received: 05/12/05

Date Analyzed: 05/13/05
Method: EPA 8260B

QC Batch #: 5533



Hexavalent Chromium in Water

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29785	MW-8	Hexavalent Chromium (Cr+6)	ND (3)	0.005

Date Sampled: 05/12/05	Date Analyzed: 05/13/05	QC Batch #: 5532
Date Received: 05/12/05	Method: EPA 7196A	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29786	MW-12	Hexavalent Chromium (Cr+6)	ND (3)	0.005

Date Sampled: 05/12/05	Date Analyzed: 05/13/05	QC Batch #: 5532
Date Received: 05/12/05	Method: EPA 7196A	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29787	MW-11	Hexavalent Chromium (Cr+6)	ND (3)	0.005

Date Sampled: 05/12/05	Date Analyzed: 05/13/05	QC Batch #: 5532
Date Received: 05/12/05	Method: EPA 7196A	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29788	MW-9	Hexavalent Chromium (Cr+6)	ND (3)	0.005

Date Sampled: 05/12/05	Date Analyzed: 05/13/05	QC Batch #: 5532
Date Received: 05/12/05	Method: EPA 7196A	



Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29789	MW-5	Hexavalent Chromium (Cr+6)	ND (3)	0.005

Date Sampled: 05/12/05	Date Analyzed: 05/13/05	QC Batch #: 5532
Date Received: 05/12/05	Method: EPA 7196A	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29790	MW-10	Hexavalent Chromium (Cr+6)	ND (3)	0.005

Date Sampled: 05/12/05	Date Analyzed: 05/13/05	QC Batch #: 5532
Date Received: 05/12/05	Method: EPA 7196A	

(3) The specific analysis for hexavalent chromium performed within 24 hours yielded a detection limit of 0.010 mg/L. Subsequent and separate analysis for total chromium using Zeeman graphite furnace (EPA 200.9) resulted in no detection of chromium at a detection limit well below 0.005 mg/L. Hexavalent chromium is not present at the level of 0.005 mg/L.



Bromate and Bromide in Water

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29785	MW-8	Bromate (BrO_3^{-1})	ND (4)	0.015
		Bromide (Br^{-1})	ND	0.20

Date Sampled: 05/12/05	Date Analyzed: 05/16/05	QC Batch #: 5530
Date Received: 05/12/05	Methods: EPA 300 (IC)	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29786	MW-12	Bromate (BrO_3^{-1})	ND (4)	0.015
		Bromide (Br^{-1})	ND	0.20

Date Sampled: 05/12/05	Date Analyzed: 05/16/05	QC Batch #: 5530
Date Received: 05/12/05	Methods: EPA 300 (IC)	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29787	MW-11	Bromate (BrO_3^{-1})	ND (4)	0.015
		Bromide (Br^{-1})	ND	0.20

Date Sampled: 05/12/05	Date Analyzed: 05/16/05	QC Batch #: 5530
Date Received: 05/12/05	Methods: EPA 300 (IC)	



Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29788	MW-9	Bromate (BrO_3^{-1})	ND (4)	0.015
		Bromide (Br^{-1})	ND	0.20

Date Sampled: 05/12/05	Date Analyzed: 05/16/05	QC Batch #: 5530
Date Received: 05/12/05	Methods: EPA 300 (IC)	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29789	MW-5	Bromate (BrO_3^{-1})	ND (4)	0.015
		Bromide (Br^{-1})	ND	0.20

Date Sampled: 05/12/05	Date Analyzed: 05/16/05	QC Batch #: 5530
Date Received: 05/12/05	Methods: EPA 300 (IC)	

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29790	MW-10	Bromate (BrO_3^{-1})	ND (4)	0.015
		Bromide (Br^{-1})	ND	0.20

Date Sampled: 05/12/05	Date Analyzed: 05/16/05	QC Batch #: 5530
Date Received: 05/12/05	Methods: EPA 300 (IC)	

(4) The sample required a dilution due to a sample matrix interference. The dilution resulted in a slight increase in the reported detection limit.



Metals in Water

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29785	MW-8	Molybdenum (Mo)	ND	0.05
		Selenium (Se)	ND	0.005
		Vanadium (V)	ND	0.05

Date Sampled: 05/12/05	Date Digested: 05/13/05	QC Batch #: 5531
Date Received: 05/12/05	Date Analyzed: 05/13/05	
Methods: EPA 3010/6010, EPA 200.9		

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29786	MW-12	Molybdenum (Mo)	ND	0.05
		Selenium (Se)	ND	0.005
		Vanadium (V)	ND	0.05

Date Sampled: 05/12/05	Date Digested: 05/13/05	QC Batch #: 5531
Date Received: 05/12/05	Date Analyzed: 05/13/05	
Methods: EPA 3010/6010, EPA 200.9		

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29787	MW-11	Molybdenum (Mo)	ND	0.05
		Selenium (Se)	ND	0.005
		Vanadium (V)	ND	0.05

Date Sampled: 05/12/05	Date Digested: 05/13/05	QC Batch #: 5531
Date Received: 05/12/05	Date Analyzed: 05/13/05	
Methods: EPA 3010/6010, EPA 200.9		



Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29788	MW-9	Molybdenum (Mo)	ND	0.05
		Selenium (Se)	ND	0.005
		Vanadium (V)	ND	0.05

Date Sampled: 05/12/05	Date Digested: 05/13/05	QC Batch #: 5531
Date Received: 05/12/05	Date Analyzed: 05/13/05	
Methods: EPA 3010/6010, EPA 200.9		

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29789	MW-5	Molybdenum (Mo)	ND	0.05
		Selenium (Se)	ND	0.005
		Vanadium (V)	ND	0.05

Date Sampled: 05/12/05	Date Digested: 05/13/05	QC Batch #: 5531
Date Received: 05/12/05	Date Analyzed: 05/13/05	
Methods: EPA 3010/6010, EPA 200.9		

Lab #	Sample ID	Analysis	Result (mg/L)	RDL (mg/L)
29790	MW-10	Molybdenum (Mo)	ND	0.05
		Selenium (Se)	ND	0.005
		Vanadium (V)	ND	0.05

Date Sampled: 05/12/05	Date Digested: 05/13/05	QC Batch #: 5531
Date Received: 05/12/05	Date Analyzed: 05/13/05	
Methods: EPA 3010/6010, EPA 200.9		



LABORATORY QUALITY ASSURANCE REPORT

QC Batch #: 5535

Lab Project #: 5051206

Sample ID	Compound	Result (ug/L)
MB	TPH/Gas	ND
MB	MTBE	ND
MB	Benzene	ND
MB	Toluene	ND
MB	Ethyl Benzene	ND
MB	Xylenes	ND

Sample #	Sample ID	Compound	Result (ug/L)	Spike Level	% Recv.
29782	CMS	TPH/Gas		NS	
	CMS	Benzene	9.10	10.0	91.0
	CMS	Toluene	9.39	10.0	93.9
	CMS	Ethyl Benzene	9.82	10.0	98.2
	CMS	Xylenes	30.0	30.0	99.9

Sample #	Sample ID	Compound	Result (ug/L)	Spike Level	% Recv.	RPD
29782	CMSD	TPH/Gas		NS		
	CMSD	Benzene	8.68	10.0	86.8	4.8
	CMSD	Toluene	9.02	10.0	90.2	4.0
	CMSD	Ethyl Benzene	9.40	10.0	94.0	4.4
	CMSD	Xylenes	27.4	30.0	94.1	8.9

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range; NR = No Recovery



QC Batch #: 5534

Lab Project #: 5051206

Sample ID	Compound	Result (ug/L)
MB	TPH/Diesel	ND

Sample ID	Compound	Result (ug/L)	Spike Level	% Recv.
LCS	TPH/Diesel	2,060	2,730	75.5

Sample ID	Compound	Result (ug/L)	Spike Level	% Recv.	RPD
LCSD	TPH/Diesel	2,020	2,730	74.0	2.0

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range; NR = No Recovery

QC Batch #: 5533

Lab Project #: 5051206

Sample ID	Compound Name	Result (ug/L)
MB	1,1-dichloroethene	ND
MB	benzene	ND
MB	trichloroethene	ND
MB	toluene	ND
MB	chlorobenzene	ND

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	20.2	101	70 – 130
toluene-d ₈ (20)	20.2	101	70 – 130
4-bromofluorobenzene (20)	19.9	99.5	70 – 130



Sample #	Sample ID	Compound Name	Result (ug/L)	Spike Level	% Recv.
29783	CMS	1,1-dichloroethene	19.8	25.0	79.2
	CMS	benzene	23.1	25.0	92.4
	CMS	trichloroethene	22.8	25.0	91.2
	CMS	toluene	23.8	25.0	95.2
	CMS	chlorobenzene	24.0	25.0	96.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	20.5	103	70 – 130
toluene-d ₈ (20)	20.1	101	70 – 130
4-bromofluorobenzene (20)	19.1	95.5	70 – 130

Sample #	Sample ID	Compound Name	Result (ug/L)	Spike Level	% Recv.	RPD
29783	CMSD	1,1-dichloroethene	19.9	25.0	79.6	0.50
	CMSD	benzene	23.2	25.0	92.8	0.43
	CMSD	trichloroethene	22.6	25.0	90.4	0.88
	CMSD	toluene	24.0	25.0	96.0	0.84
	CMSD	chlorobenzene	24.1	25.0	96.4	0.42

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	20.4	102	70 – 130
toluene-d ₈ (20)	20.2	101	70 – 130
4-bromofluorobenzene (20)	19.2	96.0	70 – 130

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range; NR = No Recovery



QC Batch #: 5532

Lab Project #: 5051206

Sample ID	Compound	Result (mg/L)
MB	Hexavalent Chromium (Cr+6)	ND

Sample ID	Compound	Result (mg/L)	Spike Level	% Recv.
LCS	Hexavalent Chromium (Cr+6)	0.982	1.00	98.2

Sample ID	Compound	Result (mg/L)	Spike Level	% Recv.	RPD
LCSD	Hexavalent Chromium (Cr+6)	0.976	1.00	97.6	0.61

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range; NR = No Recovery

QC Batch #: 5537/5531Lab Project #: 5051206

Sample ID	Compound	Result (mg/L)
MB	Vanadium	ND
MB	Selenium	ND
MB	Molybdenum	ND

Sample ID	Compound	Result (mg/L)	Spike Level	% Recv.
LCS	Vanadium	0.481	0.500	96.2
LCS	Selenium	0.0227	0.025	90.8
LCS	Molybdenum	0.509	0.500	102

Sample ID	Compound	Result (mg/L)	Spike Level	% Recv.	RPD
LCSD	Vanadium	0.494	0.500	98.8	2.7
LCSD	Selenium	0.0243	0.025	97.2	8.0
LCSD	Molybdenum	0.518	0.500	104	1.8

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range; NR = No Recovery



CHAIN OF CUSTODY

Analytical Sciences
P.O. Box 750336, Petaluma, CA 94975-0336
110 Liberty Street, Petaluma, CA 94952
(707) 769-3128
Fax (707) 769-8093

LAB PROJECT NUMBER: 5051206
WINZLER & KELLY PROJECT NAME: Winzler's Property
WINZLER & KELLY PROJECT NUMBER: 0259805021.3200

GEOTRACKER EDF: A Y N
GLOBAL ID: T0609700531

COOLER TEMPERATURE
Blue Ice °C

COC

PAGE 1 OF 1

TURNAROUND TIME (check one)
MOBILE LAB ☒ Hex Chrome 24 hr hold time
SAME DAY _____
24 HOURS _____
48 HOURS _____
72 HOURS _____
5 DAYS _____
NORMAL ☒

CLIENT INFORMATION
COMPANY NAME: WINZLER & KELLY CONSULTING ENGINEERS
ADDRESS: 495 TESCONI CIRCLE, SUITE 9
SANTA ROSA, CA 95401-4696
CONTACT: Res: Ms. Swartz; Questions: Ron
PHONE#: (707) 523-1010
FAX #: (707) 527-8679

ANALYSIS											LAB SAMPLE #									
ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	TPH/GAS/BTEX EPA 8015M/8030B	TPH DIESEL / MOTOR OIL EPA 8015M	VOLATILE HYDROCARBONS EPA 8260B (FULL USE)	BTEX & OXYGENATES TPH/GAS/BTEX EPA 8260B	OXYGENATED FUEL ADDITIVES EPA 8260M	CHLORINATED SOLVENTS EPA 8010 / EPA 8260B	SEMI-VOLATILE HYDROCARBONS EPA 8270	TPH / TOG SM 5520F / EPA 418.1M	PESTICIDES / PCB'S EPA 8081 / 8141/ 8082	CAM 17 METALS / 5 LUFT METALS	Hex Chrome EPA 300	Hex Chrome EPA 300	Comments	LAB SAMPLE #
1				W	4V	Y	X			X									* Please add acetone volu EPA 8260B * Please provide chromatograms	29782
2	DW-3521	5/12/05	11:00	W	4V	Y	X			X									acetone volu EPA 8260B	29782
3	DW-3415	5/12/05	10:45	W	4V	Y	X			X									EPA 8260B	29783
4	DW-3450	5/12/05	15:05	W	4V	Y	X			X									* Please provide chromatograms	29784
5	MW-8	5/12/05	13:30	W	4V	Y/N	X	X		X									chromatograms	29785
6	MW-12	5/12/05	13:25	W	4V	Y/N	X	X		X										29786
7	MW-11	5/12/05	13:50	W	4V	Y/N	X	X		X									* Please set	29787
8	MW-9	5/12/05	13:51	W	4V	Y/N	X	X		X									Hex Chrome	29788
9	MW-5	5/12/05	14:07	W	4V	Y/N	X	X		X									lim - C < 5ug/L	29789
10	MW-10	5/12/05	13:00	W	4V	Y/N	X	X		X									acid Bromate	29790
11																			C < 10ug/L	

SIGNATURES
RELINQUISHED BY: P. Sanyal SAMPLED BY: Pon Sanyal
SIGNATURE: [Signature] DATE: 5/12/05 TIME: 15:40
RECEIVED BY LABORATORY: [Signature] DATE: 5/12/05 TIME: 15:40

Appendix C

GeoTracker Upload Verifications

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UPLOADING A GEO_REPORT FILE

YOUR DOCUMENT UPLOAD WAS SUCCESSFUL!

Facility Name: John's Auto Repair (former)
Global ID: T0609700531
Title: Quarterly Monitoring Report, 1st Qtr 2005, Wiggins
Document Type: Monitoring Report - Quarterly
Submittal Type: GEO_REPORT
Submittal Date/Time: 6/28/2005 7:36:31 AM
Confirmation Number: 8525464713

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Confirmation Number: 6323109865

Date/Time of Submittal: 7/22/2005 12:04:47 PM

Facility Global ID: T0609700531

Facility Name: John's Auto Repair (former)

Submittal Title: 1st Qtr 2005, EDF Report 5030206

Submittal Type: GW Monitoring Report

Electronic Submittal Information

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Confirmation Number: 9550832986

Date/Time of Submittal: 7/22/2005 1:07:52 PM

Facility Global ID: T0609700531

Facility Name: John's Auto Repair (former)

Submittal Title: 2nd Qtr 2005, EDF Report 5051206

Submittal Type: Additional Information Report

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UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Title: Well Measurement File, 2nd Qtr 2005, Wiggins
Property
Submittal Date/Time: 7/22/2005 1:24:23 PM
Confirmation
Number: 7818632364

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YOUR DOCUMENT UPLOAD WAS SUCCESSFUL!

<u>Facility Name:</u>	John's Auto Repair (former)
<u>Global ID:</u>	T0609700531
<u>Title:</u>	RAP and System Design Report, 3/2005
<u>Document Type:</u>	Workplans - Remedial Action Plan
<u>Submittal Type:</u>	GEO_REPORT
<u>Submittal Date/Time:</u>	6/29/2005 8:53:17 AM
<u>Confirmation Number:</u>	9450101554

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YOUR DOCUMENT UPLOAD WAS SUCCESSFUL!

<u>Facility Name:</u>	John's Auto Repair (former)
<u>Global ID:</u>	T0609700531
<u>Title:</u>	Free Product Removal Report , 3/18/05
<u>Document Type:</u>	Reports - Other
<u>Submittal Type:</u>	GEO_REPORT
<u>Submittal Date/Time:</u>	6/28/2005 7:38:43 AM
<u>Confirmation Number:</u>	6764630973

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UPLOADING A GEO_REPORT FILE

YOUR DOCUMENT UPLOAD WAS SUCCESSFUL!

Facility Name: John's Auto Repair (former)
Global ID: T0609700531
Title: Response to SCDHS-EHD Letter Regarding RAP
Document Type: Correspondence - Other
Submittal Type: GEO_REPORT
Submittal Date/Time: 6/28/2005 7:28:57 AM
Confirmation Number: 6764866471

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